

**DETECTING SPECIAL NUCLEAR MATERIALS IN CONTAINERS
USING HIGH-ENERGY GAMMA RAYS EMITTED BY FISSION
PRODUCTS**

ABSTRACT OF THE DISCLOSURE

A method and a system for detecting the presence of special nuclear materials in a container. The system and its method include irradiating the container with an energetic beam, so as to induce a fission in the special nuclear materials, detecting the gamma rays that are emitted from the fission products formed by the fission, to produce a detector signal, comparing the detector signal with a threshold value to form a comparison, and detecting the presence of the special nuclear materials using the comparison.

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